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October 29, 2012

RE: Revisions of Sediment Management Standards (WAC 173-204)

Dear Mr. Bradley, Ms. Hankins and Ms. Conklin:

Waterkeepers Washington represents the four licensed Waterkeeper Alliance programs in the state of Washington who have made it their mission to protect and preserve their respective watersheds and collectively be the voice for the health and sustainability of the state's collective waters.

As licensed members of the international Waterkeeper Alliance, we as the North Sound Baykeeper, Puget Soundkeeper, Columbia Riverkeeper and Spokane Riverkeeper are dedicated to protecting our local waters by patrolling our watersheds, enforcing environmental laws and educating the public. Together as Waterkeepers Washington, we work together on issues of statewide importance and impact concerning water quality, water quantity and rights, climate change and much more.

The Lands Council, based in Spokane, preserves and revitalizes Inland Northwest forests, water, and wildlife through advocacy, education, effective action, and community engagement. The Duwamish River Cleanup Coalition exists to ensure a Duwamish River cleanup that is accepted by and benefits the community and is protective of fish. Wildlife, and human health.

Together as Waterkeepers Washington, The Lands Council, and the Duwamish River Cleanup Coalition, we represent not only 7000 members and 5000 involved persons (Duwamish River Cleanup Coalition) but all of the citizens of the state of Washington who wish to exercise their right to swimmable, fishable, and drinkable waters. On the behalf of these citizens we submit these comments on Ecology's revisions to the Sediment Management Standards (WAC 173-204).

We genuinely appreciate the effort that Ecology staff has taken revising the Sediment Management Standards (SMS). We recognize substantial changes have occurred and have

identified several sections of improvement, such as, multiple improvements in the public participation process, removal of the finances of the potentially liable person from determination of the scope of the cleanup study, and the provision of more specific instances when the sediment cleanup objective can be adjusted upward.

There are, however, still significant deficiencies remaining in the proposed update. To that end, we submit the following comments on the August 2012 revision of the Sediment Management Standards.

New Cleanup Concepts:

Two new concepts include regional background and sediment cleanup unit. Both are problematic. In fact, regional background is alarming. Using a regional background approach, the cleanup standard would be set at a new normal of contamination, reflecting government and industry resistance to cleaning up local air emissions, storm water and other source. Under this approach, sediments in contaminated areas and entire regions could simply increase in toxicity on an incremental basis, and no one would be accountable. Ecology should seek to reduce toxicity and contamination to levels that are environmentally sound and based on accepted science.

Overall, we know that as Puget Sound gets cleaned up and restored, the concentration levels in the sediment will gradually decline. The target for cleanups, therefore, should be natural background, even if it will take some years before we get there. Further, Ecology does not have the staff or resources to properly create "regional" background numbers and likely the project responsible parties will use their consultants to propose regional background numbers which will be slanted towards their client's interests. We already see this approach under the current cleanups. Moreover, the sanctioning of lesser regional standards will disproportionately affect lower income citizens who reside in more polluted areas and species which are already struggling due to habitat encroachment and stormwater contamination (the coho in Longfellow Creek, for example).

Our organizations are opposed to the concept of "regional background" and we ask for it to be stricken from the rule.

Line #	Comment
1555	The following cleanup standards language is not protective: "If a risk-based concentration is below the regional background level or level that can be reliably measured, then the cleanup screening level is established at a concentration equal to the practical quantitation limit or regional background, whichever is HIGHER." To be protective of human health and biota, especially for bioaccumlative toxins, we ask that the word higher be changed to ***lower***, if the regional background concept is to remain in code.
1488	The cleanup strategy using sediment cleanup units will likely be developed on a case by case basis. We have not seen, however, an outline of how sediment cleanup units fit into a strategy. For example, how will cleanup of a unit expedite the overall cleanup? What will prevent a developer or land-owner from expediting the cleanup in unit and gaining from it financially, while the other parts of the cleanup languish? We are also concerned that tax payers will end up paying for inadequate cleanups, especially in areas next to the units.

	We believe the following approach should be taken to ensure cleanup of the entire site. There should be a legal agreement will between the PLP and Ecology to ensure that the cleanup process is completed and that the PLP is held financially responsible. The PLP should be obliged to either meet agreed upon incremental goals regarding the cleanup of the entire site or donate to a fund for cleanup of the site. If the PLP fails to meet these conditions, future earnings of the PLP should be garnished to cover the cost of the cleanup

Source Control

Source control measures and the standards for meeting them should be made explicit by Ecology. Prescribing source control methods and testing is necessary in order to avoid re-contamination of sites, as witnessed in the Duwamish River cleanup. As well, a more stringent approach to stormwater will help alleviate the gradual degradation of our waters.

Line #	Comment
1493	The rule contains the following language: "Use of source control measures to minimize future contamination." Without specificity, the rule language is almost meaningless. We suggest Ecology add the following verbiage: all potential sources of contamination will be identified and stormwater pollutants will be controlled by accepted BMPs, through source reduction strategies, or by a capture and treat technology. Pre- and post- treatment stormwater samples will be taken to assure that reduction of contamination was successful.
1813	Add the following sentence to this section: If source control has not been analyzed and implemented for a cleanup site, then that site will be relisted until the source control component is completed.

Standards

Further explanation must be provided why Ecology has set sediment cleanup objectives at such high levels. The cleanup objectives for copper, lead and zinc are especially concerning. It is our opinion that Ecology should establish levels at or similar to consensus-based threshold effect concentrations (TECs) established in MacDonald et al. (2000). These standards have been adopted widely adopted across the country in states including but not limited to: Minnesota, Ohio, and Massachusetts. Ecology should either provide sufficient evidence as to why Washington merits higher standards or adopt standards more consistent with consensus-based TECs.

The high level for the sediment cleanup objective (SCO) of copper is especially concerning considering the potential effects to salmon. Significant resources have gone into protecting salmon and salmon habitat in Washington, leaving SCOs for copper at current levels will jeopardize any progress. While copper is vital to healthy growth of fish, it is also toxic and can cause irreversible damage at concentrations even slightly above those required for healthy growth (Hall et al. 1988, Eisler 2000, Baldwin et al. 2003).

Copper can result in a variety of health issue in salmon, such as, impaired sense of smell, impaired ability to fight disease, impaired ability to sense vibrations (identify predators), delayed or accelerated salmon hatch rate, as well as reducing salmon food sources. Impaired sense of smell for salmon is particularly devastating, as salmon use their sense of smell to identify mates, predators and prey alike, confusing these relations could be fatal. In addition an impaired sense of smell will interfere with salmon migration; salmon will not be able to identify chemical signatures and will spawn in non-natal habitats. In these habitats to which they're not adapted, the survival rate will drop (Woody, 2007).We therefore ask Ecology to strongly consider revising the SCOs to provide more adequate protection for salmon, as well as all aquatic species.

Standards should be set allowing the upper and lower sediment cleanup screening levels, cleanup screening levels (CSLs) and sediment cleanup objective to be determined by regional and background is not protective of the health of aquatic species. The establishment of SCOs and CSLs should be based on risk-based concentrations, in order to protect both human and aquatic species health, even if the concentrations are below regional backgrounds. As well, we continue to believe that the use of bioassayoverrides are not protective of human health and biota (see below).

Line #	Comment
2690	Chemical standards are significantly higher than other national and state standards, especially with regard to copper, lead, and zinc. An explanation should be provided as to why these elevated levels are necessary in Washington or standards more in line with consensus-based TECs should be adopted.
2488	How the biological criteria are used is unclear. In practice we have seen that bioassay passes can override the MCL. Is this proposed to still be the case? Please be clear about how these tests are used. For example, in Whatcom Waterway, bioassay passes overrode chemical tests for mercury, a bioaccumulative toxin. To Ecology's credit, a further standard called the "biological screening level" was established specifically for this site, although we argue that this level was set too high. In the practice of protecting human health and safety, bioassay over-rides should not be allowed. Bioassays rely on test organisms only and cannot be said to account for the variability and sensitivity of the wide diversity of organisms found in Puget Sound. While it is true that bioassays did inform the selection of the SQS and MCL values, these values rely on average expectation in the area; they will not be predictive of every site, just as bioassays with test organisms will not be predictive of every site. Thus, with two inexact measures, it is more conservative and prudent; to neither disallow bioassay or chemical overrides of one another.

Public Participation

Public participation in the sediment cleanup process is essential. The public is affected in a variety of ways, including but not limited to: health concerns related to proximity, public access concerns regarding future use of contaminated sites, and concerns regarding contamination of food sources. Ecology should make very clear when and how information regarding the public participation in the cleanup process can be accessed. In addition deadlines for public comment should be made explicit and should be set at minimum of 30 days, to allow for full participation. More detailed comments are listed below in table format.

Line #	Comment
1754, 1788	Ecology should provide the name of the list of contaminated sediments sites as well as its location and the frequency of updates. Providing such information will help the public stay involved in the cleanup process.
1961	The public notice period should be at least 30 days for small cleanups, and longer for larger or more complicated cleanups. This will allow for full public participation
1956	Public Participation Plan: The elements required in the plan focus on getting information from the public and pushing out information to the public. There is no actual dialogue with the public or discussion. These shortcomings in the code are reflected in actual practice. The public, represented by our groups and others, experience a disconnection between public concern and agency action and response. Add a requirement for public stakeholders, PLP, and agency discussion that occurs at early intervals during RI/FS and work plan development. We find that the initial decisions made between the PLP and Ecology prior to the issuance of the RI and FS, are really quite solid before the public ever gets to weigh in. Thus, the public really does not get to meaningfully participate in decisions. At a minimum, the proposed biologically active zone and the proposed sediment cleanup standards should be made available to the public before the RI/FS is issued- such that the public can provide early feedback about whether they believe these standards are acceptable. In addition, the public should have a role in the alternatives discussion and the choosing of a preferred alternative ***before*** the official draft RI/FS comes out for official public comment. Required discussion sessions between all of the stakeholders, including the public, may be the only way to make this happen.
2911	Under the section "Minimum Requirements for Cleanup Actions," mention of public comment and review is made, but no specifics are given. This section should be linked back to section 173-204-550, such that public participation is formalized.

CLEANUP PROCESS

The below detailed comments will provide more clarity and protectiveness to the cleanup process.

1512	In regard to cleanup process expectations, please include underlined wording in code: Monitoring will typically include analysis of sediment chemistry at a minimum, but may also include bioassays, tissue chemistry, pore water and surface water testing, especially where these initially exceeded cleanup standards and more intense discharge monitoring than would normally occur under a discharge permit where circumstances warrant.
1518	Also, in regard to cleanup process expectations and scope of information, please require that characterization include the full lateral and vertical extent of contamination for each site. In the absence of this information, a site unit cannot be defined and inadequate cleanup will ensue. Lack of complete characterization upfront at contaminated sites has led to inefficient decision making processes and a therefore a more costly cleanup process at numerous sites. It is much more cost-effective and scientifically valid to do a full characterization at the beginning of an investigation.
1570	Enhanced Natural Recovery (ENR) is not appropriate in many areas as a cleanup action. This action simply dilutes the contamination that is present. It should only be potentially considered in an area that is already depositional, to speed up the natural sediment deposition process. In an area that is neither depositional nor erosional, the thin layer cap used as ENR will not be sufficient to suffice as cleanup. In an area that is erosional, ENR should not be contemplated at all. The code should be amended to: Sediment contamination may be addressed by active cleanup actions such as dredging, capping, treatment, and enhanced natural recovery, the latter in depositional areas only.
1588	We believe that it is essential that Ecology retains its right to protect human health and the environment through its ability to amend cleanup actions. How will the department make the determination that the previous cleanup action is no longer sufficiently protective of human health and the environment?
2896	A reasonable restoration timeframe is said to be 10 years from the start of cleanup action. This is not reasonable. This standard should be 5 years or less, especially because this is measured only from the start of the cleanup action, itself. An additional measure of restoration timeframe should include the time from which a cleanup site is identified to when it is cleaned. Please institute enforceable timelines for ***each*** of the steps associated with cleanup, from discovery to final cleanup.

Sediment Impact Zones and Sediment Recovery Zones

It is not clear how a polluting activity can be in the public interest engendering the necessity of sediment recovery zones and sediment impact zones, whereas the minimization of pollution

below sediment standards is not in the public interest. Please see Table below for comments on sediment recovery zones and sediment impact zones.

1508	A sediment recovery zone should not be an option for a cleanup action. This simply allows pollution to remain in place and is an unacceptable solution.
3064	Notwithstanding our opposition to sediment recovery zones, the ability to declare a contaminated area a sediment recovery zone, with mere review and re-approval every 10 years is impermissible. Review should occur every 5 years and a cap of 20 years should be the maximum allowed.
1013	In regard to a sediment impact zone, how will cost be used in the process of determining the minimum practicable chemical contamination and biological effects levels? While cost is obviously a factor in the ability to implement a plan, it should not be given the same weight as other considerations such as: environmental effects, short/long term viability and technical feasibility. The section goes on to say, "Adverse effects to biological resources within an authorized sediment impact zone shall not exceed a minor adverse effects level as a result of the discharge, as determined by the procedures of subsection (4) of this section." Subsection (4) however, does not ensure compliance, however.
1116	Subsection (4) delineates many actions and studies, but it does not limit the amount of toxics entering and remaining in the sediment. Within code, describe how these actions and studies will be used to limit the amount of pollutants entering the sediment.

Definitions/Clarification

There are several instances that we feel would benefit from further definition and clarification, to ensure that protective standards and cleanups are upheld.

Line #	**Comment**
261	While specific metrics for establishing depth of the Biologically Active Zone are appreciated, a minimum of 20 cm in conjunction with a determination by using said metrics would be more acceptable. Changes to the code, make it appear as though BAZ could be less than 10 cm, providing less protection than the previous draft of the SMS.
1606	Clearer and more specific definitions of station and station cluster are needed. Since sampling of stations and station clusters are the identified mechanisms to list sites, these need to be understood in practical terms. For example, how far apart can individual stations be for them to be part of one station cluster, how big is a station, etc.
1957	How is "cannot practicably achieve" defined. Cleanups of over 10 years are significant, there should not be any ambiguity regarding this exception.
3025	"Practicable" should be more clearly defined when dealing with cleanups of such great length.

Thank you for the opportunity to comment on the Sediment Management Standards. We would be happy to meet with you in person about the SMS rule to discuss our concerns.

Sincerely,

Matt Krogh, North Sound Baykeeper, RE Sources
Bart Mihailovich, Spokane Riverkeeper
Mike Petersen, Executive Director, The Lands Council
James Rasmussen, Coordinator, Duwamish River Cleanup Coalition
Heather Trim, TAG Boardmember, Duwamish River Cleanup Coalition
Brett VandenHeuvel, Executive Director, Columbia Riverkeeper
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